UNITED STATES PATENT AND TRADEMARK OFFICE

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/516,881	12/03/2004	Kazuyuki Nako	0033-0964PUS1	1659

2292   7590   05/06/2010
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EXAMINER
DWIVEDI, MAHESH H

ART UNIT	PAPER NUMBER
2168	

NOTIFICATION DATE	DELIVERY MODE
05/06/2010	ELECTRONIC

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

mailroom@bskb.com

	Application No.	Applicant(s)
Office Action Summary	10/516,881	NAKO, KAZUYUKI
	Examiner	**Art Unit**
	MAHESH H. DWIVEDI	2168

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE <u>3</u> MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.
- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
  Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on <u>05 April 2010</u>.
2a)☐ This action is **FINAL**.   2b)☒ This action is non-final.
3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) <u>1,4-17 and 19</u> is/are pending in the application.
    4a) Of the above claim(s) _____ is/are withdrawn from consideration.
5)☐ Claim(s) _____ is/are allowed.
6)☒ Claim(s) <u>1,4-17 and 19</u> is/are rejected.
7)☐ Claim(s) _____ is/are objected to.
8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.
10)☒ The drawing(s) filed on <u>03 December 2004</u> is/are: a)☒ accepted or b)☐ objected to by the Examiner.
    Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
    Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
    a)☒ All   b)☐ Some * c)☐ None of:
      1.☒ Certified copies of the priority documents have been received.
      2.☐ Certified copies of the priority documents have been received in Application No. _____.
      3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
    * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1)☐ Notice of References Cited (PTO-892)
2)☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3)☐ Information Disclosure Statement(s) (PTO/SB/08)
    Paper No(s)/Mail Date _____.

4)☐ Interview Summary (PTO-413)
    Paper No(s)/Mail Date. _____.
5)☐ Notice of Informal Patent Application
6)☐ Other: _____.

DETAILED ACTION

Continued Examination Under 37 CFR 1.114

1.   A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 04/05/2010 has been entered.

Remarks

2.   Receipt of Applicant's Amendment, filed on 04/05/2010, is acknowledged. The amendment includes the amending of claims 1, 4-9, and 19, and the cancellation of claims 2-3, and 18.

Priority

3.   Receipt is acknowledged of papers submitted under 35 U.S.C. 119(a)-(d), which papers have been placed of record in the file.

Claim Rejections - 35 USC § 103

4.   The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

5.   Claims 1, 3-19 are rejected under 35 U.S.C. 103(a) as being unpatentable over **Hyon** (U.S. PGPUB 2002/0077135) in view of **Baker** (U.S. Patent 6,546,417), and further in view of **Ostermann et al.** (U.S. Patent 6,990,452).

6.   Regarding claim 1, **Hyon** teaches a display device comprising:

A) a first storage portion for storing beforehand a character code for specifying each of said predetermined kind of character, and character shape data corresponding to said character code in a correlated manner (Paragraphs 23, and 41-42, Figure 4);

B) a second storage portion for storing an image code for specifying said registered image and non-standardized image data corresponding to said image code in a correlated manner according to registration processing by a user (Paragraphs 23, 25, and 44, Figure 2);

C) a display output portion for outputting said predetermined kind of character and said registered image (Paragraph 21, Figure 2); and

D) a display control portion for causing said display output portion to output corresponding said predetermined kind of character and said registered image both belonging to an identical sentence based on display data containing a series of said character code, text attribute data, and said image code (Paragraphs 21 and 41-42).

The examiner notes that **Hyon** teaches **"a first storage portion for storing beforehand a character code for specifying each of said predetermined kind of character, and character shape data corresponding to said character code in a correlated manner"** as "A storage 18 is comprised of a ROM (Read Only Memory) and a RAM (Random Access Memory) for storing programs and data, and a voice memory. The storage 18 stores an operation program for inputting emoticons and a plurality of emoticons in the form of a bit map according to the embodiment of the present invention. The plurality of emoticons are stored by groups in the storage 18 to facilitate selection of emoticons" (Paragraph 23) and "the user can input a text including typical characters, special characters, or emoticons within the range of a transmittable SMS message, by changing input modes" (Paragraph 41). The examiner further notes that **Hyon** teaches **"a second storage portion for storing an image code for specifying said registered image and non-standardized image data corresponding to said image code in a correlated manner according to registration processing by a user"** as "A storage 18 is comprised of a ROM (Read Only Memory) and a RAM (Random Access Memory) for storing programs and data, and a voice memory. The storage 18 stores an operation program for inputting emoticons and a plurality of emoticons in the form of a bit map according to the embodiment of the present invention. The plurality of emoticons are stored by groups in the storage 18 to facilitate selection of emoticons" (Paragraph 23), "storage 18 stores oriental or occidental

emoticons according to the cultural area of a user" (Paragraph 25), and "A plurality of emoticons are pre-stored in a mobile terminal so that a user easily select an intended emoticon in the present invention. In another embodiment, the user can add hieroglyphics to basic emoticons stored by a manufacturer. The hieroglyphics can be stored in three ways: the user directly stores them, receives them from a base station and the stores them, or downloads them from the Internet. The user can change and edit the emoticons stored in the mobile terminal" (Paragraph 44). The examiner further notes that it is clear that the emoticons which are edited, changed, and user-generated must be stored in the RAM of storage 18 since items stored in RAM can be written to whereas items stored in ROM cannot be written (i.e. are Read-Only). The examiner further notes that **Hyon** teaches **"a display output portion for outputting said predetermined kind of character and said registered image"** as "a display 16 outputs display data and text messages generated in the mobile terminal. An LCD (Liquid Crystal Display) can be used as the display 16" (Paragraph 21). The examiner further notes that **Hyon** teaches **"a display control portion for causing said display output portion to output corresponding said predetermined kind of character and said registered image both belonging to an identical sentence based on display data containing a series of said character code, text attribute data, and said image code"** as "a display 16 outputs display data and text messages generated in the mobile terminal. An LCD (Liquid Crystal Display) can be used as the display 16" (Paragraph 21), "If the user selects "smile" in the display 6 by manipulating a left/right directional key, emoticons that belong to the group "smile" are displayed in a display 7. When the user chooses one of the "smile" emoticons " . " in the display 7, the selected emoticon is stored as part of the short message as shown in a display 8. Then, the user can input a text including typical characters, special characters, or emoticons within the range of a transmittable SMS message, by changing input modes" (Paragraph 41), and "After an intended text is completed, the user instructs the mobile terminal to transmit the SMS message including the emoticon…the mobile terminal transmits the stored message" (Paragraph 42). The examiner further notes that it is common knowledge

that when text messages are received via a device, the entire message is displayed at once.

Hyon does not explicitly teach:

F) wherein said display control portion determine whether or not a size of characters constituting the text where the registered image is inserted and a size of the registered image are substantially the same;

G) when the size of characters constituting the text where the registered image is inserted and the size of the registered image are not substantially the same, said display control portion makes the size of the characters and the size of the registered image substantially the same by scaling up/down the size of the registered image based on the text attribute data; and

I) said display control portion causes said display output portion to display a text containing characters and the registered image scaled to substantially the same size.

Baker, however, teaches **"wherein said display control portion determine whether or not a size of characters constituting the text where the registered image is inserted and a size of the registered image are substantially the same"** as "in order to accommodate the use of different size fonts in the mailbox display, means for scaling the size of the icon graphics are also provided…at least one image for each icon is stored, the icon most closely matching the point size of the font is chosen and then scaled as needed to better match the font point size" (Column 8, lines 26-40), **"when the size of characters constituting the text where the registered image is inserted and the size of the registered image are not substantially the same, said display control portion makes the size of the characters and the size of the registered image substantially the same by scaling up/down the size of the registered image based on the text attribute data"** as "in order to accommodate the use of different size fonts in the mailbox display, means for scaling the size of the icon graphics are also provided…at least one image for each icon is stored, the icon most closely matching the point size of the font is chosen and then scaled as needed to better match the font point size" (Column 8, lines 26-40), and **"said display control portion causes said display output portion to display a text containing characters**

and the registered image scaled to substantially the same size" as "in order to accommodate the use of different size fonts in the mailbox display, means for scaling the size of the icon graphics are also provided...at least one image for each icon is stored, the icon most closely matching the point size of the font is chosen and then scaled as needed to better match the font point size" (Column 8, lines 26-40).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the teachings of the cited references because teaching **Baker's** would have allowed **Hyon's** to provide a method for allowing for scalable icons to accompany texts with specified and varied fonts in order to easily associate an icon to a particular sentence, as noted by **Baker** (Column 5, lines 40-55).

Hyon and **Baker** do not explicitly teach:

E) said text attribute data containing color attribute data including at least a fore color of a corresponding predetermined kind of character;

H) said display control portion converts a color of said registered image according to said color attribute data.

Ostermann, however, teaches **"said text attribute data containing color attribute data including at least a fore color of a corresponding predetermined kind of character"** as "The increased intensity of the emoticon may be accomplished by changing the icon from black-on-white background to black-on-colored background (such as red or yellow) where the intensity of the background color reflects the amplitude" (Column 9, lines 43-67) and "The sender can associate typed words with an emoticon by underlining, coloring, highlighting, or by any other means. For example, the method may comprise providing the sender an option to assign a color to the at least typed one word such that the chosen emoticon begins to be presented by the animated entity to the recipient at the first typed word with the assigned color and the chosen emoticon presentation by the animated entity ends at the last typed word with the assigned color" (Column 11, lines 43-50) and **"said display control portion converts a color of said registered image according to said color attribute data"** as "The sender can associate typed words with an emoticon by underlining, coloring, highlighting, or by any other means. For example, the method may comprise providing

the sender an option to assign a color to the at least typed one word such that the chosen emoticon begins to be presented by the animated entity to the recipient at the first typed word with the assigned color and the chosen emoticon presentation by the animated entity ends at the last typed word with the assigned color" (Column 11, lines 43-50).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the teachings of the cited references because teaching **Ostermann's** would have allowed **Hyon's** and **Baker's** to provide a method to allow the ability to insert a customized emoticon or specified image by a single button click, as noted by **Ostermann** (Column 3, lines 35-54).

Regarding claim 4, **Hyon** and **Baker** do not explicitly teach a display device comprising:

A) wherein when said registered is a gray image, said <u>display control portion</u> converts each pixel of said registered image into a color made by mixing the fore color and a back color of said text at a ratio according to a pixel value of said predetermined kind of character.

Ostermann, however, teaches **"wherein when said registered is a gray image, said <u>display control portion</u> converts each pixel of said registered image into a color made by mixing the fore color and a back color of said text at a ratio according to a pixel value of said predetermined kind of character"** as "The increased intensity of the emoticon may be accomplished by changing the icon from black-on-white background to black-on-colored background (such as red or yellow) where the intensity of the background color reflects the amplitude" (Column 9, lines 43-67) and "The sender can associate typed words with an emoticon by underlining, coloring, highlighting, or by any other means. For example, the method may comprise providing the sender an option to assign a color to the at least typed one word such that the chosen emoticon begins to be presented by the animated entity to the recipient at the first typed word with the assigned color and the chosen emoticon presentation by

the animated entity ends at the last typed word with the assigned color" (Column 11, lines 43-50)

It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the teachings of the cited references because teaching **Ostermann's** would have allowed **Hyon's** and **Baker's** to provide a method to allow the ability to insert a customized emoticon or specified image by a single button click, as noted by **Ostermann** (Column 3, lines 35-54).

Regarding claim 5, **Hyon** and **Baker** do not explicitly teach a display device comprising:

A) wherein said text attribute data contains decoration attribute data indicating a type of a decoration applied to a corresponding predetermined kind of character; and

B) said <u>display control portion</u> decorates said registered image according to said decoration attribute data.

Ostermann, however, teaches **"wherein said text attribute data contains decoration attribute data indicating a type of a decoration applied to a corresponding predetermined kind of character"** as "The sender can associate typed words with an emoticon by underlining, coloring, highlighting, or by any other means…In this case, in a sentence such as "Hi John, :-) are you pleased that the stock market is up?" the underlining represents the highlighting wherein the sender chooses to begin the smile at the beginning of the word "are" and to continue the smile through the word "up". The method comprises receiving the indicated duration of the emoticon and presenting the chosen duration of the emoticon" (Column 11, lines 43-61) and **"said <u>display control portion</u> decorates said registered image according to said decoration attribute data"** as "The sender can associate typed words with an emoticon by underlining, coloring, highlighting, or by any other means…In this case, in a sentence such as "Hi John, :-) are you pleased that the stock market is up?" the underlining represents the highlighting wherein the sender chooses to begin the smile at the beginning of the word "are" and to continue the smile through the word "up". The

method comprises receiving the indicated duration of the emoticon and presenting the chosen duration of the emoticon" (Column 11, lines 43-61).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the teachings of the cited references because teaching **Ostermann's** would have allowed **Hyon's** and **Baker's** to provide a method to allow the ability to insert a customized emoticon or specified image by a single button click, as noted by **Ostermann** (Column 3, lines 35-54).

Regarding claim 6, **Hyon** teaches a method comprising:

A) storing an image code for specifying said registered image and registered image data corresponding to said image code <u>in a correlated manner according to registration processing by a user</u> (Paragraphs 23, 25, and 44, Figure 2);

B) said registered image being stored in a storage portion different from a storage portion of storing the predetermined kind of character (Paragraphs 23 and 44);

D) displaying said predetermined kind of character and said registered image simultaneously based on said transformed registered image (Paragraphs 21 and 41-42).

The examiner notes that **Hyon** teaches **"storing an image code for specifying said registered image and registered image data corresponding to said image code <u>in a correlated manner according to registration processing by a user</u>"** as "A storage 18 is comprised of a ROM (Read Only Memory) and a RAM (Random Access Memory) for storing programs and data, and a voice memory. The storage 18 stores an operation program for inputting emoticons and a plurality of emoticons in the form of a bit map according to the embodiment of the present invention. The plurality of emoticons are stored by groups in the storage 18 to facilitate selection of emoticons" (Paragraph 23), "storage 18 stores oriental or occidental emoticons according to the cultural area of a user" (Paragraph 25), and "A plurality of emoticons are pre-stored in a mobile terminal so that a user easily select an intended emoticon in the present invention. In another embodiment, the user can add hieroglyphics to basic emoticons stored by a manufacturer. The hieroglyphics can be stored in three ways: the user

directly stores them, receives them from a base station and the stores them, or
downloads them from the Internet. The user can change and edit the emoticons stored
in the mobile terminal" (Paragraph 44). The examiner further notes that items which are
clearly not edited/changed/manipulated (i.e. text characters) would be stored in ROM of
storage 18. Moreover, the examiner further wishes to state that it is well known that text
characters from a particular font are stored in ROM and not RAM (see cited reference of
Hersum (see column 4, lines 55-67 for reference). The examiner further notes that
Hyon teaches **"said registered image being stored in a storage portion different
from a storage portion of storing the predetermined kind of character"** as "A
storage 18 is comprised of a ROM (Read Only Memory) and a RAM (Random Access
Memory) for storing programs and data, and a voice memory. The storage 18 stores an
operation program for inputting emoticons and a plurality of emoticons in the form of a
bit map according to the embodiment of the present invention. The plurality of
emoticons are stored by groups in the storage 18 to facilitate selection of emoticons"
(Paragraph 23) and "In another embodiment, the user can add hieroglyphics to basic
emoticons stored by a manufacturer. The hieroglyphics can be stored in three ways:
the user directly stores them, receives them from a base station, and the stores them, or
downloads them from the Internet" (Paragraph 44). The examiner further notes that it is
clear that the emoticons which are edited, changed, and user-generated must be stored
in the RAM of storage 18 since items stored in RAM can be written to whereas items
stored in ROM cannot be written (i.e. are Read-Only). The examiner further notes that
Hyon teaches **"displaying said predetermined kind of character and said
registered image simultaneously based on said transformed registered image"** as
"a display 16 outputs display data and text messages generated in the mobile terminal.
An LCD (Liquid Crystal Display) can be used as the display 16" (Paragraph 21), "If the
user selects "smile" in the display 6 by manipulating a left/right directional key,
emoticons that belong to the group "smile" are displayed in a display 7. When the user
chooses one of the "smile" emoticons " . " in the display 7, the selected emoticon is
stored as part of the short message as shown in a display 8. Then, the user can input a
text including typical characters, special characters, or emoticons within the range of a

transmittable SMS message, by changing input modes" (Paragraph 41), and "After an intended text is completed, the user instructs the mobile terminal to transmit the SMS message including the emoticon…the mobile terminal transmits the stored message" (Paragraph 42).

Hyon does not explicitly teach:

C) with respect to display data containing a series of a character code, text attribute data, and said image code, transforming said registered image to be displayed according to said text attribute data;

F) by determining whether or not a size of characters constituting the text where the registered image is inserted and a size of the registered image are substantially the same;

G) when the size of characters constituting the text where the registered image is inserted and the size of the registered image are not substantially the same, said display control portion makes the size of the characters and the size of the registered image substantially the same by scaling up/down the size of the registered image based on the text attribute data;

I) causing said display output portion to display a text containing characters scaled to substantially the same size as the registered image.

Baker, however, teaches **"with respect to display data containing a series of a character code, text attribute data, and said image code, transforming said registered image to be displayed according to said text attribute data"** as "in order to accommodate the use of different size fonts in the mailbox display, means for scaling the size of the icon graphics are also provided…at least one image for each icon is stored, the icon most closely matching the point size of the font is chosen and then scaled as needed to better match the font point size" (Column 8, lines 26-40), **"by determining whether or not a size of characters constituting the text where the registered image is inserted and a size of the registered image are substantially the same"** as "in order to accommodate the use of different size fonts in the mailbox display, means for scaling the size of the icon graphics are also provided…at least one image for each icon is stored, the icon most closely matching the point size of the font is

chosen and then scaled as needed to better match the font point size" (Column 8, lines 26-40), **"when the size of characters constituting the text where the registered image is inserted and the size of the registered image are not substantially the same, said display control portion makes the size of the characters and the size of the registered image substantially the same by scaling up/down the size of the registered image based on the text attribute data"** as "in order to accommodate the use of different size fonts in the mailbox display, means for scaling the size of the icon graphics are also provided…at least one image for each icon is stored, the icon most closely matching the point size of the font is chosen and then scaled as needed to better match the font point size" (Column 8, lines 26-40), and **"causing said display output portion to display a text containing characters scaled to substantially the same size as the registered image"** as "in order to accommodate the use of different size fonts in the mailbox display, means for scaling the size of the icon graphics are also provided…at least one image for each icon is stored, the icon most closely matching the point size of the font is chosen and then scaled as needed to better match the font point size" (Column 8, lines 26-40).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the teachings of the cited references because teaching **Baker's** would have allowed **Hyon's** to provide a method for allowing for scalable icons to accompany texts with specified and varied fonts in order to easily associate an icon to a particular sentence, as noted by **Baker** (Column 5, lines 40-55).

Hyon and **Baker** do not explicitly teach:

C) said text attribute data containing color attribute data indicating at least a fore color of a corresponding predetermined kind of character;

E) so that said registered image is sandwiched between two parts of said text of said predetermined kind of character in a line of said identical sentence;

H) converting a color of said registered image according to said color attribute data.

Ostermann, however, teaches **"said text attribute data containing color attribute data indicating at least a fore color of a corresponding predetermined kind of character"** as "The increased intensity of the emoticon may be accomplished

by changing the icon from black-on-white background to black-on-colored background
(such as red or yellow) where the intensity of the background color reflects the
amplitude" (Column 9, lines 43-67) and "The sender can associate typed words with an
emoticon by underlining, coloring, highlighting, or by any other means. For example,
the method may comprise providing the sender an option to assign a color to the at
least typed one word such that the chosen emoticon begins to be presented by the
animated entity to the recipient at the first typed word with the assigned color and the
chosen emoticon presentation by the animated entity ends at the last typed word with
the assigned color" (Column 11, lines 43-50), **"so that said registered image is
sandwiched between two parts of said text of said predetermined kind of
character in a line of said identical sentence"** as "The sender may also insert
emoticons 103 into the text of the message. The system includes predefined emoticons
96, such as ":-) " for a smile, "::-)" for a head nod, "*w*" for an eye wink, and so forth.
The predefined emoticons are represented either as icons or as text, such as ";-)". As
shown in FIG. 6, the window 80 includes a sample group of emoticon icons 96. The
sender inserts an emoticon into a text message at the location of the cursor 102 by
clicking on one of the emoticon icons 100. The sender may also type in the desired
emoticon as text. Emoticon icons 96 save the sender from needing to type three keys,
such as ":" and "-" and ")" for a smile. The icons 96 may be either a picture of, say, a
winking eye or a icon representation of the characters ";-)" 100, or other information
indicating to the sender that clicking on that emoticon icon will insert the associated
emotion 103 into the text at the location of the cursor 102" (Column 8, lines 35-50), and
**"<u>converting a color of said registered image according to said color attribute
data</u>"** as "The increased intensity of the emoticon may be accomplished by changing
the icon from black-on-white background to black-on-colored background (such as red
or yellow) where the intensity of the background color reflects the amplitude" (Column 9,
lines 43-67) and "The sender can associate typed words with an emoticon by
underlining, coloring, highlighting, or by any other means. For example, the method
may comprise providing the sender an option to assign a color to the at least typed one
word such that the chosen emoticon begins to be presented by the animated entity to

the recipient at the first typed word with the assigned color and the chosen emoticon presentation by the animated entity ends at the last typed word with the assigned color" (Column 11, lines 43-50).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the teachings of the cited references because teaching **Ostermann's** would have allowed **Hyon's** and **Baker's** to provide a method to allow the ability to insert a customized emoticon or specified image by a single button click, as noted by **Ostermann** (Column 3, lines 35-54).

Regarding claim 7, **Hyon** teaches a viewer program comprising:
A) storing an image code for specifying said registered image and registered image data corresponding to said image code <u>in a correlated manner according to registration processing by a user</u> (Paragraphs 23, 25, and 44, Figure 2);
B) said registered image being stored in a storage portion different from a storage portion of storing the predetermined kind of character (Paragraphs 23 and 44);
D) displaying said predetermined kind of character and said registered image simultaneously based on said transformed registered image (Paragraphs 21 and 41-42).

The examiner notes that **Hyon** teaches **"storing an image code for specifying said registered image and registered image data corresponding to said image code <u>in a correlated manner according to registration processing by a user</u>"** as "A storage 18 is comprised of a ROM (Read Only Memory) and a RAM (Random Access Memory) for storing programs and data, and a voice memory. The storage 18 stores an operation program for inputting emoticons and a plurality of emoticons in the form of a bit map according to the embodiment of the present invention. The plurality of emoticons are stored by groups in the storage 18 to facilitate selection of emoticons" (Paragraph 23), "storage 18 stores oriental or occidental emoticons according to the cultural area of a user" (Paragraph 25), and "A plurality of emoticons are pre-stored in a mobile terminal so that a user easily select an intended emoticon in the present invention. In another embodiment, the user can add hieroglyphics to basic emoticons

stored by a manufacturer. The hieroglyphics can be stored in three ways: the user
directly stores them, receives them from a base station and the stores them, or
downloads them from the Internet. The user can change and edit the emoticons stored
in the mobile terminal" (Paragraph 44). The examiner further notes that items which are
clearly not edited/changed/manipulated (i.e. text characters) would be stored in ROM of
storage 18. Moreover, the examiner further wishes to state that it is well known that text
characters from a particular font are stored in ROM and not RAM (see cited reference of
Hersum (see column 4, lines 55-67 for reference). The examiner further notes that
Hyon teaches **"said registered image being stored in a storage portion different
from a storage portion of storing the predetermined kind of character"** as "A
storage 18 is comprised of a ROM (Read Only Memory) and a RAM (Random Access
Memory) for storing programs and data, and a voice memory. The storage 18 stores an
operation program for inputting emoticons and a plurality of emoticons in the form of a
bit map according to the embodiment of the present invention. The plurality of
emoticons are stored by groups in the storage 18 to facilitate selection of emoticons"
(Paragraph 23) and "In another embodiment, the user can add hieroglyphics to basic
emoticons stored by a manufacturer. The hieroglyphics can be stored in three ways:
the user directly stores them, receives them from a base station, and the stores them, or
downloads them from the Internet" (Paragraph 44). The examiner further notes that it is
clear that the emoticons which are edited, changed, and user-generated must be stored
in the RAM of storage 18 since items stored in RAM can be written to whereas items
stored in ROM cannot be written (i.e. are Read-Only). The examiner further notes that
Hyon teaches **"displaying said predetermined kind of character and said
registered image simultaneously based on said transformed registered image"** as
"a display 16 outputs display data and text messages generated in the mobile terminal.
An LCD (Liquid Crystal Display) can be used as the display 16" (Paragraph 21), "If the
user selects "smile" in the display 6 by manipulating a left/right directional key,
emoticons that belong to the group "smile" are displayed in a display 7. When the user
chooses one of the "smile" emoticons " . " in the display 7, the selected emoticon is
stored as part of the short message as shown in a display 8. Then, the user can input a

text including typical characters, special characters, or emoticons within the range of a transmittable SMS message, by changing input modes" (Paragraph 41), and "After an intended text is completed, the user instructs the mobile terminal to transmit the SMS message including the emoticon…the mobile terminal transmits the stored message" (Paragraph 42). The examiner further notes that it is common knowledge that when text messages are received via a device, the entire message is displayed at once. The examiner further notes that **Hyon** teaches **"when displaying a vertical writing"** as "Emoticons are usually divided into two categories: oriental ones used among Asians including Koreans and Japanese, and occidental ones mainly used in the U.S. and Europe. Vertical hieroglyphics prevail in the former case, whereas horizontal ones prevail in the latter case. Therefore, storage 18 stores oriental or occidental emoticons according to the cultural area of a user" (Paragraph 25).

Hyon does not explicitly teach:

C) with respect to display data containing a series of a character code, text attribute data, and said image code, transforming said registered image to be displayed according to said text attribute data;

F) by determining whether or not a size of characters constituting the text where the registered image is inserted and a size of the registered image are substantially the same;

G) when the size of characters constituting the text where the registered image is inserted and the size of the registered image are not substantially the same, said display control portion makes the size of the characters and the size of the registered image substantially the same by scaling up/down the size of the registered image based on the text attribute data; and

I) causing said display output portion to display a text containing characters scaled to substantially the same size as the registered image.

Baker, however, teaches **"with respect to display data containing a series of a character code, text attribute data, and said image code, transforming said registered image to be displayed according to said text attribute data"** as "in order to accommodate the use of different size fonts in the mailbox display, means for scaling

the size of the icon graphics are also provided…at least one image for each icon is stored, the icon most closely matching the point size of the font is chosen and then scaled as needed to better match the font point size" (Column 8, lines 26-40), **"by determining whether or not a size of characters constituting the text where the registered image is inserted and a size of the registered image are substantially the same"** as "in order to accommodate the use of different size fonts in the mailbox display, means for scaling the size of the icon graphics are also provided…at least one image for each icon is stored, the icon most closely matching the point size of the font is chosen and then scaled as needed to better match the font point size" (Column 8, lines 26-40), **"when the size of characters constituting the text where the registered image is inserted and the size of the registered image are not substantially the same, said display control portion makes the size of the characters and the size of the registered image substantially the same by scaling up/down the size of the registered image based on the text attribute data"** as "in order to accommodate the use of different size fonts in the mailbox display, means for scaling the size of the icon graphics are also provided…at least one image for each icon is stored, the icon most closely matching the point size of the font is chosen and then scaled as needed to better match the font point size" (Column 8, lines 26-40), and **"causing said display output portion to display a text containing characters scaled to substantially the same size as the registered image"** as "in order to accommodate the use of different size fonts in the mailbox display, means for scaling the size of the icon graphics are also provided…at least one image for each icon is stored, the icon most closely matching the point size of the font is chosen and then scaled as needed to better match the font point size" (Column 8, lines 26-40).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the teachings of the cited references because teaching **Baker's** would have allowed **Hyon's** to provide a method for allowing for scalable icons to accompany texts with specified and varied fonts in order to easily associate an icon to a particular sentence, as noted by **Baker** (Column 5, lines 40-55).

Hyon and **Baker** do not explicitly teach:

C) <u>said text attribute data containing color attribute data indicating at least a fore color</u> <u>of a corresponding predetermined kind of character</u>;

E) so that said registered image is sandwiched between two parts of said text of said predetermined kind of character in a line of said identical sentence;

H) <u>converting a color of said registered image according to said color attribute data</u>.

   Ostermann, however, teaches **"<u>said text attribute data containing color</u>** **<u>attribute data indicating at least a fore color of a corresponding predetermined</u>** **<u>kind of character</u>"** as "The increased intensity of the emoticon may be accomplished by changing the icon from black-on-white background to black-on-colored background (such as red or yellow) where the intensity of the background color reflects the amplitude" (Column 9, lines 43-67) and "The sender can associate typed words with an emoticon by underlining, coloring, highlighting, or by any other means. For example, the method may comprise providing the sender an option to assign a color to the at least typed one word such that the chosen emoticon begins to be presented by the animated entity to the recipient at the first typed word with the assigned color and the chosen emoticon presentation by the animated entity ends at the last typed word with the assigned color" (Column 11, lines 43-50), **"so that said registered image is** **sandwiched between two parts of said text of said predetermined kind of** **character in a line of said identical sentence"** as "The sender may also insert emoticons 103 into the text of the message. The system includes predefined emoticons 96, such as ":-) " for a smile, "::-)" for a head nod, "*w*" for an eye wink, and so forth. The predefined emoticons are represented either as icons or as text, such as ";-)". As shown in FIG. 6, the window 80 includes a sample group of emoticon icons 96. The sender inserts an emoticon into a text message at the location of the cursor 102 by clicking on one of the emoticon icons 100. The sender may also type in the desired emoticon as text. Emoticon icons 96 save the sender from needing to type three keys, such as ":" and "-" and ")" for a smile. The icons 96 may be either a picture of, say, a winking eye or a icon representation of the characters ";-)" 100, or other information indicating to the sender that clicking on that emoticon icon will insert the associated emotion 103 into the text at the location of the cursor 102" (Column 8, lines 35-50), and

**"converting a color of said registered image according to said color attribute
data, and causing said display output portion to display a text containing
characters scaled to substantially the same size as the registered image"** as "The
increased intensity of the emoticon may be accomplished by changing the icon from
black-on-white background to black-on-colored background (such as red or yellow)
where the intensity of the background color reflects the amplitude" (Column 9, lines 43-
67) and "The sender can associate typed words with an emoticon by underlining,
coloring, highlighting, or by any other means. For example, the method may comprise
providing the sender an option to assign a color to the at least typed one word such that
the chosen emoticon begins to be presented by the animated entity to the recipient at
the first typed word with the assigned color and the chosen emoticon presentation by
the animated entity ends at the last typed word with the assigned color" (Column 11,
lines 43-50).

It would have been obvious to one of ordinary skill in the art at the time the
invention was made to combine the teachings of the cited references because teaching
Ostermann's would have allowed **Hyon's** and **Baker's** to provide a method to allow
the ability to insert a customized emoticon or specified image by a single button click, as
noted by **Ostermann** (Column 3, lines 35-54).

Regarding claim 8, **Hyon** teaches a computer readable recording medium
comprising:
A) storing an image code for specifying said registered image and registered image
data corresponding to said image code in a correlated manner according to registration
processing by a user (Paragraphs 23, 25, and 44, Figure 2);
B) said registered image stored in a storage portion different from a storage portion of
storing the predetermined kind of character (Paragraphs 23 and 44);
D) displaying said predetermined kind of character and said registered image
simultaneously based on said transformed registered image (Paragraphs 21 and 41-
42).

The examiner notes that **Hyon** teaches **"storing an image code for specifying said registered image and registered image data corresponding to said image code <u>in a correlated manner according to registration processing by a user</u>"** as "A storage 18 is comprised of a ROM (Read Only Memory) and a RAM (Random Access Memory) for storing programs and data, and a voice memory. The storage 18 stores an operation program for inputting emoticons and a plurality of emoticons in the form of a bit map according to the embodiment of the present invention. The plurality of emoticons are stored by groups in the storage 18 to facilitate selection of emoticons" (Paragraph 23), "storage 18 stores oriental or occidental emoticons according to the cultural area of a user" (Paragraph 25), and "A plurality of emoticons are pre-stored in a mobile terminal so that a user easily select an intended emoticon in the present invention. In another embodiment, the user can add hieroglyphics to basic emoticons stored by a manufacturer. The hieroglyphics can be stored in three ways: the user directly stores them, receives them from a base station and the stores them, or downloads them from the Internet. The user can change and edit the emoticons stored in the mobile terminal" (Paragraph 44). The examiner further notes that it is clear that the emoticons which are edited, changed, and user-generated must be stored in the RAM of storage 18 since items stored in RAM can be written to whereas items stored in ROM cannot be written (i.e. are Read-Only). The examiner further notes that items which are clearly not edited/changed/manipulated (i.e. text characters) would be stored in ROM of storage 18. Moreover, the examiner further wishes to state that it is well known that text characters from a particular font are stored in ROM and not RAM (see cited reference of **Hersum** (see column 4, lines 55-67 for reference). The examiner further notes that **Hyon** teaches **"said registered image stored in a storage portion different from a storage portion of storing the predetermined kind of character"** as "A storage 18 is comprised of a ROM (Read Only Memory) and a RAM (Random Access Memory) for storing programs and data, and a voice memory. The storage 18 stores an operation program for inputting emoticons and a plurality of emoticons in the form of a bit map according to the embodiment of the present invention. The plurality of emoticons are stored by groups in the storage 18 to facilitate selection of emoticons"

(Paragraph 23) and "In another embodiment, the user can add hieroglyphics to basic emoticons stored by a manufacturer. The hieroglyphics can be stored in three ways: the user directly stores them, receives them from a base station, and the stores them, or downloads them from the Internet" (Paragraph 44). The examiner further notes that **Hyon** teaches **"displaying said predetermined kind of character and said registered image simultaneously based on said transformed registered image"** as "a display 16 outputs display data and text messages generated in the mobile terminal. An LCD (Liquid Crystal Display) can be used as the display 16" (Paragraph 21), "If the user selects "smile" in the display 6 by manipulating a left/right directional key, emoticons that belong to the group "smile" are displayed in a display 7. When the user chooses one of the "smile" emoticons " . " in the display 7, the selected emoticon is stored as part of the short message as shown in a display 8. Then, the user can input a text including typical characters, special characters, or emoticons within the range of a transmittable SMS message, by changing input modes" (Paragraph 41), and "After an intended text is completed, the user instructs the mobile terminal to transmit the SMS message including the emoticon…the mobile terminal transmits the stored message" (Paragraph 42). The examiner further notes that it is common knowledge that when text messages are received via a device, the entire message is displayed at once. The examiner further notes that **Hyon** teaches **"when displaying a vertical writing"** as "Emoticons are usually divided into two categories: oriental ones used among Asians including Koreans and Japanese, and occidental ones mainly used in the U.S. and Europe. Vertical hieroglyphics prevail in the former case, whereas horizontal ones prevail in the latter case. Therefore, storage 18 stores oriental or occidental emoticons according to the cultural area of a user" (Paragraph 25).

　　　　Hyon does not explicitly teach:

C) with respect to display data containing a series of a character code, text attribute data, and said image code, transforming said registered image to be displayed according to said text attribute data;

F) by determining whether or not a size of characters constituting the text where the registered image is inserted and a size of the registered image are substantially the same;

G) when the size of characters constituting the text where the registered image is inserted and the size of the registered image are not substantially the same, said display control portion makes the size of the characters and the size of the registered image substantially the same by scaling up/down the size of the registered image based on the text attribute data; and

I) causing said display output portion to display a text containing characters scaled to substantially the same size as the registered image.

Baker, however, teaches **"with respect to display data containing a series of a character code, text attribute data, and said image code, transforming said registered image to be displayed according to said text attribute data"** as "in order to accommodate the use of different size fonts in the mailbox display, means for scaling the size of the icon graphics are also provided…at least one image for each icon is stored, the icon most closely matching the point size of the font is chosen and then scaled as needed to better match the font point size" (Column 8, lines 26-40), **"by determining whether or not a size of characters constituting the text where the registered image is inserted and a size of the registered image are substantially the same"** as "in order to accommodate the use of different size fonts in the mailbox display, means for scaling the size of the icon graphics are also provided…at least one image for each icon is stored, the icon most closely matching the point size of the font is chosen and then scaled as needed to better match the font point size" (Column 8, lines 26-40), **"when the size of characters constituting the text where the registered image is inserted and the size of the registered image are not substantially the same, said display control portion makes the size of the characters and the size of the registered image substantially the same by scaling up/down the size of the registered image based on the text attribute data"** as "in order to accommodate the use of different size fonts in the mailbox display, means for scaling the size of the icon graphics are also provided…at least one image for each icon is stored, the icon most

closely matching the point size of the font is chosen and then scaled as needed to better match the font point size" (Column 8, lines 26-40), and **"causing said display output portion to display a text containing characters scaled to substantially the same size as the registered image"** as "in order to accommodate the use of different size fonts in the mailbox display, means for scaling the size of the icon graphics are also provided…at least one image for each icon is stored, the icon most closely matching the point size of the font is chosen and then scaled as needed to better match the font point size" (Column 8, lines 26-40).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the teachings of the cited references because teaching **Baker's** would have allowed **Hyon's** to provide a method for allowing for scalable icons to accompany texts with specified and varied fonts in order to easily associate an icon to a particular sentence, as noted by **Baker** (Column 5, lines 40-55).

Hyon and **Baker** do not explicitly teach:

C) said text attribute data containing color attribute data indicating at least a fore color of a corresponding predetermined kind of character;

E) so that said registered image is sandwiched between two parts of said text of said predetermined kind of character in a line of said identical sentence;

H) converting a color of said registered image according to said color attribute data.

Ostermann, however, teaches **"said text attribute data containing color attribute data indicating at least a fore color of a corresponding predetermined kind of character"** as "The increased intensity of the emoticon may be accomplished by changing the icon from black-on-white background to black-on-colored background (such as red or yellow) where the intensity of the background color reflects the amplitude" (Column 9, lines 43-67) and "The sender can associate typed words with an emoticon by underlining, coloring, highlighting, or by any other means. For example, the method may comprise providing the sender an option to assign a color to the at least typed one word such that the chosen emoticon begins to be presented by the animated entity to the recipient at the first typed word with the assigned color and the chosen emoticon presentation by the animated entity ends at the last typed word with

the assigned color" (Column 11, lines 43-50), **"so that said registered image is sandwiched between two parts of said text of said predetermined kind of character in a line of said identical sentence"** as "The sender may also insert emoticons 103 into the text of the message. The system includes predefined emoticons 96, such as ":-) " for a smile, "::-)" for a head nod, "*w*" for an eye wink, and so forth. The predefined emoticons are represented either as icons or as text, such as ";-)". As shown in FIG. 6, the window 80 includes a sample group of emoticon icons 96. The sender inserts an emoticon into a text message at the location of the cursor 102 by clicking on one of the emoticon icons 100. The sender may also type in the desired emoticon as text. Emoticon icons 96 save the sender from needing to type three keys, such as ":" and "-" and ")" for a smile. The icons 96 may be either a picture of, say, a winking eye or a icon representation of the characters ";-)" 100, or other information indicating to the sender that clicking on that emoticon icon will insert the associated emotion 103 into the text at the location of the cursor 102" (Column 8, lines 35-50), and **"<u>converting a color of said registered image according to said color attribute data, and causing said display output portion to display a text containing characters scaled to substantially the same size as the registered image</u>"** as "The increased intensity of the emoticon may be accomplished by changing the icon from black-on-white background to black-on-colored background (such as red or yellow) where the intensity of the background color reflects the amplitude" (Column 9, lines 43-67) and "The sender can associate typed words with an emoticon by underlining, coloring, highlighting, or by any other means. For example, the method may comprise providing the sender an option to assign a color to the at least typed one word such that the chosen emoticon begins to be presented by the animated entity to the recipient at the first typed word with the assigned color and the chosen emoticon presentation by the animated entity ends at the last typed word with the assigned color" (Column 11, lines 43-50).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the teachings of the cited references because teaching **Ostermann's** would have allowed **Hyon's** and **Baker's** to provide a method to allow

the ability to insert a customized emoticon or specified image by a single button click, as noted by **Ostermann** (Column 3, lines 35-54).

Regarding claim 9, **Hyon** and **Baker** do not explicitly teach a display device comprising:

A) wherein said <u>display control portion</u> includes image decoration means for decorating said registered image to provide continuous decoration to both said registered image and neighboring predetermined kind of characters adjacent to said registered image according to said decoration attribute data.

Ostermann, however, teaches **"wherein said <u>display control portion</u> includes image decoration means for decorating said registered image to provide continuous decoration to both said registered image and neighboring predetermined kind of characters adjacent to said registered image according to said decoration attribute data"** as "The sender can associate typed words with an emoticon by underlining, coloring, highlighting, or by any other means…In this case, in a sentence such as "Hi John, :-) are you pleased that the stock market is up?" the underlining represents the highlighting wherein the sender chooses to begin the smile at the beginning of the word "are" and to continue the smile through the word "up". The method comprises receiving the indicated duration of the emoticon and presenting the chosen duration of the emoticon as the animated entity delivers the message. As mentioned above, the highlighting can occur through coloring words, underlining words, or some other means of presenting the emotion" (Column 11, lines 43-61).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the teachings of the cited references because teaching **Ostermann's** would have allowed **Hyon's** and **Baker's** to provide a method to allow the ability to insert a customized emoticon or specified image by a single button click, as noted by **Ostermann** (Column 3, lines 35-54).

Regarding claim 10, **Hyon** and **Baker** do not explicitly teach a display device comprising:

A) wherein said image decoration means decorates said registered image, such that both said registered image and said neighboring predetermined kind of characters show the said fore and back colors continuously.

Ostermann, however, teaches **"wherein said image decoration means decorates said registered image, such that both said registered image and said neighboring predetermined kind of characters show the said fore and back colors continuously"** as The increased intensity of the emoticon may be accomplished by changing the icon from black-on-white background to black-on-colored background (such as red or yellow) where the intensity of the background color reflects the amplitude" (Column 9, lines 43-67) and "The sender can associate typed words with an emoticon by underlining, coloring, highlighting, or by any other means…In this case, in a sentence such as "Hi John, :-) are you pleased that the stock market is up?" the underlining represents the highlighting wherein the sender chooses to begin the smile at the beginning of the word "are" and to continue the smile through the word "up". The method comprises receiving the indicated duration of the emoticon and presenting the chosen duration of the emoticon as the animated entity delivers the message. As mentioned above, the highlighting can occur through coloring words, underlining words, or some other means of presenting the emotion" (Column 11, lines 43-61).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the teachings of the cited references because teaching **Ostermann's** would have allowed **Hyon's** and **Baker's** to provide a method to allow the ability to insert a customized emoticon or specified image by a single button click, as noted by **Ostermann** (Column 3, lines 35-54).

Regarding claim 11, **Hyon** and **Baker** do not explicitly teach a display device comprising:
A) wherein said image decoration means decorates said registered image to draw a continuous underline below both said registered image and said neighboring predetermined kind of characters.

Ostermann, however, teaches **"wherein said image decoration means decorates said registered image to draw a continuous underline below both said registered image and said neighboring predetermined kind of characters"** as "The sender can associate typed words with an emoticon by underlining, coloring, highlighting, or by any other means...In this case, in a sentence such as "Hi John, :-) are you pleased that the stock market is up?" the underlining represents the highlighting wherein the sender chooses to begin the smile at the beginning of the word "are" and to continue the smile through the word "up". The method comprises receiving the indicated duration of the emoticon and presenting the chosen duration of the emoticon as the animated entity delivers the message. As mentioned above, the highlighting can occur through coloring words, underlining words, or some other means of presenting the emotion" (Column 11, lines 43-61).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the teachings of the cited references because teaching **Ostermann's** would have allowed **Hyon's** and **Baker's** to provide a method to allow the ability to insert a customized emoticon or specified image by a single button click, as noted by **Ostermann** (Column 3, lines 35-54).

Regarding claim 12, **Hyon** and **Baker** do not explicitly teach a display device comprising:

A) wherein said image decoration means decorates said registered image to draw a continuous cancel line on both said registered image and said neighboring predetermined kind of characters.

Ostermann, however, teaches **"wherein said image decoration means decorates said registered image to draw a continuous cancel line on both said registered image and said neighboring predetermined kind of characters"** as "The sender can associate typed words with an emoticon by underlining, coloring, highlighting, or by any other means...In this case, in a sentence such as "Hi John, :-) are you pleased that the stock market is up?" the underlining represents the highlighting wherein the sender chooses to begin the smile at the beginning of the word "are" and to

continue the smile through the word "up". The method comprises receiving the indicated duration of the emoticon and presenting the chosen duration of the emoticon as the animated entity delivers the message. As mentioned above, the highlighting can occur through coloring words, underlining words, or some other means of presenting the emotion" (Column 11, lines 43-61).

The examiner notes that it is clear that **Ostermann's** method can use various computer font techniques to apply to sentences with emoticons, such as underlines and highlighters.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the teachings of the cited references because teaching **Ostermann's** would have allowed **Hyon's** and **Baker's** to provide a method to allow the ability to insert a customized emoticon or specified image by a single button click, as noted by **Ostermann** (Column 3, lines 35-54).

Regarding claim 13, **Hyon** further teaches a display device comprising:

A) wherein the first storage portion is a ROM (Paragraph 23); and

B) the second storage portion is a RAM (Paragraphs 23 and 44).

The examiner notes that **Hyon** teaches **"wherein the first storage portion is a ROM"** as "A storage 18 is comprised of a ROM (Read Only Memory) and a RAM (Random Access Memory) for storing programs and data, and a voice memory. The storage 18 stores an operation program for inputting emoticons and a plurality of emoticons in the form of a bit map according to the embodiment of the present invention. The plurality of emoticons are stored by groups in the storage 18 to facilitate selection of emoticons" (Paragraph 23). The examiner further notes that items which are clearly not edited/changed/manipulated (i.e. text characters) would be stored in ROM of storage 18. Moreover, the examiner further wishes to state that it is well known that text characters from a particular font are stored in ROM and not RAM (see cited reference of **Hersum** (see column 4, lines 55-67 for reference). The examiner further notes that **Hyon** teaches **"the second storage portion is a RAM"** as "A storage 18 is comprised of a ROM (Read Only Memory) and a RAM (Random Access Memory) for

storing programs and data, and a voice memory. The storage 18 stores an operation program for inputting emoticons and a plurality of emoticons in the form of a bit map according to the embodiment of the present invention. The plurality of emoticons are stored by groups in the storage 18 to facilitate selection of emoticons" (Paragraph 23) and "A plurality of emoticons are pre-stored in a mobile terminal so that a user easily select an intended emoticon in the present invention. In another embodiment, the user can add hieroglyphics to basic emoticons stored by a manufacturer. The hieroglyphics can be stored in three ways: the user directly stores them, receives them from a base station and the stores them, or downloads them from the Internet. The user can change and edit the emoticons stored in the mobile terminal" (Paragraph 44). The examiner further notes that it is clear that the emoticons which are edited, changed, and user-generated must be stored in the RAM of storage 18 since items stored in RAM can be written to whereas items stored in ROM cannot be written (i.e. are Read-Only).

Regarding claims 14-17, **Hyon** and **Baker** do not explicitly teach a display device, display method, viewer program, and computer-readable recording medium comprising:

A) wherein the text containing the predetermined kind of character and the registered image is used in a Hyper Text Markup Language document.

Ostermann, however, teaches **"wherein the text containing the predetermined kind of character and the registered image is used in a Hyper Text Markup Language document"** as "FIG. 4(a) illustrates a high-bandwidth architecture 60 associated with the embodiments of the invention. The system 60 delivers a hyper-text mark-up language (HTML) page through the Internet 62 (connected to a web server, not shown but embodied in the Internet 62) to a client application 64. The HTML page (shown by way of example in FIG. 6) enables the sender to create a multi-media message. The client application may be, for example, a web browser such as Microsoft's Internet Explorer.RTM.. Other client applications include e-mail and instant messaging clients. The sender creates the multi-media message using the HTML page" (Column 4, lines 53-63).

The examiner notes that it is clear that **Ostermann's** method can use various computer font techniques to apply to sentences with emoticons, such as underlines and highlighters.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the teachings of the cited references because teaching **Ostermann's** would have allowed **Hyon's** and **Baker's** to provide a method to allow the ability to insert a customized emoticon or specified image by a single button click, as noted by **Ostermann** (Column 3, lines 35-54).

Regarding claim 19, **Hyon** teaches a method comprising:

A) storing beforehand a character code for specifying each of said predetermined kind of character, and character shape data corresponding to said character in a correlated manner (Paragraphs 23, and 41-42, Figure 4);

B) storing an image code for specifying said registered image and registered image data corresponding to said image code in a correlated manner according to registration processing by a user (Paragraphs 23, 25, and 44, Figure 2);

C) outputting said predetermined kind of character and said registered image (Paragraph 21, Figure 2); and

D) causing said display output portion to output corresponding said predetermined kind of character and said registered image both belonging to an identical sentence based on display data containing a series of said character code, text attribute data, and said image code (Paragraphs 21 and 41-42).

The examiner notes that **Hyon** teaches "**storing beforehand a character code for specifying each of said predetermined kind of character, and character shape data corresponding to said character in a correlated manner**" as "A storage 18 is comprised of a ROM (Read Only Memory) and a RAM (Random Access Memory) for storing programs and data, and a voice memory. The storage 18 stores an operation program for inputting emoticons and a plurality of emoticons in the form of a bit map according to the embodiment of the present invention. The plurality of emoticons are stored by groups in the storage 18 to facilitate selection of emoticons" (Paragraph 23)

and "the user can input a text including typical characters, special characters, or emoticons within the range of a transmittable SMS message, by changing input modes" (Paragraph 41). The examiner further notes that **Hyon** teaches **"storing an image code for specifying said registered image and registered image data corresponding to said image code in a correlated manner <u>according to registration processing by a user</u>"** as "A storage 18 is comprised of a ROM (Read Only Memory) and a RAM (Random Access Memory) for storing programs and data, and a voice memory. The storage 18 stores an operation program for inputting emoticons and a plurality of emoticons in the form of a bit map according to the embodiment of the present invention. The plurality of emoticons are stored by groups in the storage 18 to facilitate selection of emoticons" (Paragraph 23), "storage 18 stores oriental or occidental emoticons according to the cultural area of a user" (Paragraph 25), and "A plurality of emoticons are pre-stored in a mobile terminal so that a user easily select an intended emoticon in the present invention. In another embodiment, the user can add hieroglyphics to basic emoticons stored by a manufacturer. The hieroglyphics can be stored in three ways: the user directly stores them, receives them from a base station and the stores them, or downloads them from the Internet. The user can change and edit the emoticons stored in the mobile terminal" (Paragraph 44). The examiner further notes that it is clear that the emoticons which are edited, changed, and user-generated must be stored in the RAM of storage 18 since items stored in RAM can be written to whereas items stored in ROM cannot be written (i.e. are Read-Only). The examiner further notes that **Hyon** teaches **"outputting said predetermined kind of character and said registered image"** as "a display 16 outputs display data and text messages generated in the mobile terminal. An LCD (Liquid Crystal Display) can be used as the display 16" (Paragraph 21). The examiner further notes that **Hyon** teaches **"causing said display output portion to output corresponding said predetermined kind of character and said registered image both belonging to an identical sentence based on display data containing a series of said character code, text attribute data, and said image code"** as "a display 16 outputs display data and text messages generated in the mobile terminal. An LCD (Liquid Crystal Display) can be

used as the display 16" (Paragraph 21), "If the user selects "smile" in the display 6 by manipulating a left/right directional key, emoticons that belong to the group "smile" are displayed in a display 7. When the user chooses one of the "smile" emoticons " . " in the display 7, the selected emoticon is stored as part of the short message as shown in a display 8. Then, the user can input a text including typical characters, special characters, or emoticons within the range of a transmittable SMS message, by changing input modes" (Paragraph 41), and "After an intended text is completed, the user instructs the mobile terminal to transmit the SMS message including the emoticon…the mobile terminal transmits the stored message" (Paragraph 42). The examiner further notes that it is common knowledge that when text messages are received via a device, the entire message is displayed at once.

     Hyon does not explicitly teach:

F) determining whether or not size of characters constituting the text where the registered image is inserted and a size of the registered image are substantially the same;

G) when the size of characters constituting the text where the registered image is inserted and the size of the registered image are not substantially the same, said display control portion makes the size of the characters and the size of the registered image substantially the same by scaling up/down the size of the registered image based on the text attribute data; and

I) said display control portion causes said display output portion to display a text containing characters and the registered image scaled to substantially the same size.

     Baker, however, teaches **"determining whether or not size of characters constituting the text where the registered image is inserted and a size of the registered image are substantially the same"** as "in order to accommodate the use of different size fonts in the mailbox display, means for scaling the size of the icon graphics are also provided…at least one image for each icon is stored, the icon most closely matching the point size of the font is chosen and then scaled as needed to better match the font point size" (Column 8, lines 26-40), **"when the size of characters constituting the text where the registered image is inserted and the size of the**

registered image are not substantially the same, said display control portion makes the size of the characters and the size of the registered image substantially the same by scaling up/down the size of the registered image based on the text attribute data" as "in order to accommodate the use of different size fonts in the mailbox display, means for scaling the size of the icon graphics are also provided…at least one image for each icon is stored, the icon most closely matching the point size of the font is chosen and then scaled as needed to better match the font point size" (Column 8, lines 26-40), and **"said display control portion causes said display output portion to display a text containing characters and the registered image scaled to substantially the same size"** as "in order to accommodate the use of different size fonts in the mailbox display, means for scaling the size of the icon graphics are also provided…at least one image for each icon is stored, the icon most closely matching the point size of the font is chosen and then scaled as needed to better match the font point size" (Column 8, lines 26-40).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the teachings of the cited references because teaching **Baker's** would have allowed **Hyon's** to provide a method for allowing for scalable icons to accompany texts with specified and varied fonts in order to easily associate an icon to a particular sentence, as noted by **Baker** (Column 5, lines 40-55).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the teachings of the cited references because teaching **Baker's** would have allowed **Hyon's** to provide a method for allowing for scalable icons to accompany texts with specified and varied fonts in order to easily associate an icon to a particular sentence, as noted by **Baker** (Column 5, lines 40-55).

Hyon and **Baker** do not explicitly teach:

E) said text attribute data containing color attribute data indicating at least a fore color of a corresponding predetermined kind of character;

H) converting a color of said registered image according to said color attribute data.

Ostermann, however, teaches **"said text attribute data containing color attribute data including at least a fore color of a corresponding predetermined**

kind of character" as "The increased intensity of the emoticon may be accomplished by changing the icon from black-on-white background to black-on-colored background (such as red or yellow) where the intensity of the background color reflects the amplitude" (Column 9, lines 43-67) and "The sender can associate typed words with an emoticon by underlining, coloring, highlighting, or by any other means. For example, the method may comprise providing the sender an option to assign a color to the at least typed one word such that the chosen emoticon begins to be presented by the animated entity to the recipient at the first typed word with the assigned color and the chosen emoticon presentation by the animated entity ends at the last typed word with the assigned color" (Column 11, lines 43-50) and **"said display control portion converts a color of said registered image according to said color attribute data"** as "The sender can associate typed words with an emoticon by underlining, coloring, highlighting, or by any other means. For example, the method may comprise providing the sender an option to assign a color to the at least typed one word such that the chosen emoticon begins to be presented by the animated entity to the recipient at the first typed word with the assigned color and the chosen emoticon presentation by the animated entity ends at the last typed word with the assigned color" (Column 11, lines 43-50).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the teachings of the cited references because teaching **Ostermann's** would have allowed **Hyon's** and **Baker's** to provide a method to allow the ability to insert a customized emoticon or specified image by a single button click, as noted by **Ostermann** (Column 3, lines 35-54).

Response to Arguments

7.   Applicant's arguments filed on 04/05/2010 have been fully considered but they are not persuasive.

Applicants argue on page 13 that **"these icons are also part of the display of the operating system and are not images corresponding to image codes in a correlated manner according to registration processing by a user"**. However, the examiner wishes to state that the primary art of **Hyon** teaches the aforementioned.

Specifically, the examiner wishes to refer to Paragraphs 23, 25, and 44 of **Hyon** which state "A storage 18 is comprised of a ROM (Read Only Memory) and a RAM (Random Access Memory) for storing programs and data, and a voice memory. The storage 18 stores an operation program for inputting emoticons and a plurality of emoticons in the form of a bit map according to the embodiment of the present invention. The plurality of emoticons are stored by groups in the storage 18 to facilitate selection of emoticons" (Paragraph 23), "storage 18 stores oriental or occidental emoticons according to the cultural area of a user" (Paragraph 25), and "A plurality of emoticons are pre-stored in a mobile terminal so that a user easily select an intended emoticon in the present invention. In another embodiment, the user can add hieroglyphics to basic emoticons stored by a manufacturer. The hieroglyphics can be stored in three ways: the user directly stores them, receives them from a base station and the stores them, or downloads them from the Internet. The user can change and edit the emoticons stored in the mobile terminal" (Paragraph 44). The examiner further notes that it is clear that the emoticons which are edited, changed, and user-generated must be stored in the RAM of storage 18 since items stored in RAM can be written to whereas items stored in ROM cannot be written (i.e. are Read-Only). The examiner further notes that it is clear that a user "registers" the emoticons in **Hyon** because the user is allowed to modify/edit/create emoticons.

Applicants argue on page 13 that **"nor are these icons intended to be inserted into a textual sentence in the manner described by the claimed invention"**. However, the examiner wishes to refer to Column 8 of **Ostermann** which states "The sender may also insert emoticons 103 into the text of the message. The system includes predefined emoticons 96, such as ":-) " for a smile, "::-)" for a head nod, "*w*" for an eye wink, and so forth. The predefined emoticons are represented either as icons or as text, such as ";-)". As shown in FIG. 6, the window 80 includes a sample group of emoticon icons 96. The sender inserts an emoticon into a text message at the location of the cursor 102 by clicking on one of the emoticon icons 100. The sender may also type in the desired emoticon as text. Emoticon icons 96 save the sender from needing to type three keys, such as ":" and "-" and ")" for a smile. The icons 96 may be either a

picture of, say, a winking eye or a icon representation of the characters ";-)" 100, or other information indicating to the sender that clicking on that emoticon icon will insert the associated emotion 103 into the text at the location of the cursor 102" (Column 8, lines 35-50). The examiner further wishes to state that it is clear that that emoticon is in between words of a sentence.

Applicants argue on page 13 that **"Ostermann merely recites text having a particular color is assigned to an emoticon. The reference is silent regarding converting a color of a registered image according to color attribute data in the text attribute data of the text in the sentence with the registered image"**. However, the examiner wishes to refer to Columns 9 and 11 of **Ostermann** which state "The increased intensity of the emoticon may be accomplished by changing the icon from black-on-white background to black-on-colored background (such as red or yellow) where the intensity of the background color reflects the amplitude" (Column 9, lines 43-67) and "The sender can associate typed words with an emoticon by underlining, coloring, highlighting, or by any other means. For example, the method may comprise providing the sender an option to assign a color to the at least typed one word such that the chosen emoticon begins to be presented by the animated entity to the recipient at the first typed word with the assigned color and the chosen emoticon presentation by the animated entity ends at the last typed word with the assigned color" (Column 11, lines 43-50). The examiner further wishes to state that assigning a color to a word clearly teaches the claimed color attribute data of text. Moreover because the color of the emoticon is the same color as that of the assigned text color, it is clearly converted because it matches the desired color.

Applicants argue on pages 13-14 that **"none of Hyon, Baker, or Ostermann teaches or suggests a display control portion…Baker fails to disclose inserting a registered image into a sentence with text, and merely describes scaling an operating system icon to the font size of text used within the window"**. However, the examiner wishes to state that the cited art of **Ostermann** teaches the claimed insertion into a sentence. Moreover, the cited art of **Baker** clearly teaches scaling emoticons to match font sizes of text characters. Therefore, the combination of **Baker**

with **Ostermann** (along with the primary reference of **Hyon**) clearly teaches the aforementioned.

Conclusion

8. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

U.S. Patent 6,987,991 by **Nelson** on 17 January 2006. The subject matter disclosed therein is pertinent to that of claims 1, 4-17, and 19 (e.g., methods automatically scale graphics into a text sentence that is sent to another user).

U.S. PGPUB 2002/0120653 by **Kraft et al.** on 29 August 2002. The subject matter disclosed therein is pertinent to that of claims 1, 4-17, and 19 (e.g., methods automatically scale graphics into a text sentence that is sent to another user).

U.S. Patent 6,584,479 by **Chang et al.** on 24 June 2003. The subject matter disclosed therein is pertinent to that of claims 1, 4-17, and 19 (e.g., methods automatically scale graphics into a text sentence that is sent to another user).

U.S. Patent 6,456,305 by **Qureshi et al.** on 24 September 2002. The subject matter disclosed therein is pertinent to that of claims 1, 4-17, and 19 (e.g., methods automatically scale graphics into a text sentence that is sent to another user).

U.S. Patent 5,301,106 by **Hersum** on 05 April 1994. The subject matter disclosed therein is pertinent to that of claims 1, 4-17, and 19 (e.g., methods automatically scale graphics into a text sentence that is sent to another user).

Contact Information

9. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Mahesh Dwivedi whose telephone number is (571) 272-2731. The examiner can normally be reached on Monday to Friday 8:20 am – 4:40 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Tim Vo can be reached (571) 272-3642. The fax number for the organization where this application or proceeding is assigned is (571) 273-8300.

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you have questions on access to the Private PAIR system, contact the Electronic
Business Center (EBC) at 866-217-9197 (toll-free).

<div align="right">
Mahesh Dwivedi

Patent Examiner

Art Unit 2168
</div>

May 04, 2010

/Mahesh H Dwivedi/

Examiner, Art Unit 2168